

Application Serial No. 09/869,082
Amendment dated December 17, 2004
Reply to Office action of September 17, 2004

REMARKS

Claims 20 through 26 and 44 are pending in this application. Claims 20 through 26 are amended herein. Claim 43 is cancelled herein. New claim 44 is added herein. Support for the amendments to the claims may be found in the claims as filed originally, as well as at page 7, lines 2-4 and page 31, lines 7-9, and in Figs. 7A-7E of the WO/00/38838 publication.

Reconsideration of this application in view of the foregoing amendments and the following remarks is respectfully requested.

Response to Arguments:

Consideration of the Applicant's arguments is again appreciated. The Office action is apparently equating measuring a droplet with, e.g. a pipet *before* placing it underneath a compliant coverslip with knowing the volume of a droplet *because* it fits under a compliant coverslip. Claim 20 has been amended to differentiate measuring a volume beforehand, as in Atwood, from knowing the volume based on what stays underneath a coverslip afterward.

Claim Rejections - 35 U.S.C. § 102:

Claims 20, 22, 23, and 25 were rejected under 35 U.S.C. § 102(b) as anticipated by Atwood et al., US 5,364,790. The rejection is traversed, to the extent it might apply to the claims as amended.

Claim 20 recites:

"said concave well having a known volume."

Atwood neither teaches, discloses, nor suggests a concave well *having* a known volume, as recited in claim 20. Cover 16 of Atwood has no known volume. Cover 16, rather, has a range of volumes to accommodate the range of volumes of reagent that might be placed underneath. Furthermore, cover 16 will have a smaller volume when it is empty than it will have after reagent has been placed underneath. The volume of cover 16, therefore, is defined by whether reagent has been placed underneath it, as well as by the volume of reagent placed underneath it. This is to be contrasted with the claimed invention, in which the concave well *itself* has a known volume.

In particular, cover 16 is a thin, generally compliant cover member 16 which is placed over sample 12, as described at column 6, lines 15 and 16, column 7, lines 38 and 39, and as shown in Fig. 1. Since cover 16 is a thin, generally compliant cover member 16, its volume will

Application Serial No. 09/869,082
Amendment dated December 17, 2004
Reply to Office action of September 17, 2004

expand or contract to conform to the volume of sample 12, rather than having a known volume as recited in claim 20.

Furthermore, cover 16 is preferably a circular disk of thin rubber sheet, as described at column 8, lines 37 and 38, like an automobile tire or a balloon. Thus, cover 16 will expand or contract to accommodate whatever volume of reagent is placed underneath, just like an automobile tire or a balloon expands to accommodate the volume of air that is pumped into it, rather than having a known volume as recited in claim 20.

Furthermore, cover 16 itself is compliant so that it can expand to accommodate the fixed reagent volume without a large increase in pressure, as described at column 12, lines 24 through 26. Thus, cover 16 deforms to accommodate whatever volume of reagent happens to have been left underneath, rather than having a known volume as recited in claim 20. Therefore, cover 16 cannot be relied on to ensure that any *particular* volume of reagent is retained underneath. Rather, the volume of reagent that ends up underneath cover 16 must be measured beforehand, if it is to be known with any degree of certainty. This is to be contrasted with the claimed invention, in which the concave well *itself* has a known volume.

Thus, in the claimed invention, the volume of reagent that will be retained in the concave well need not be measured beforehand. Rather, only a volume of reagent substantially equal to the known volume of the concave well will be retained in the concave well. Claim 20 is therefore submitted to be allowable. Withdrawal of the rejection of claim 20 is earnestly solicited.

Claims 22 and 23, 25, and 27 depend from claim 20 and add further distinguishing elements. Claims 22, 23, 25, and 27 are thus also submitted to be allowable. Withdrawal of the rejection of claims 22, 23, 25, and 27 is also earnestly solicited.

Claim 25 recites:

"said concave well having a known volume."

Atwood neither teaches, discloses, nor suggests a concave well having a known volume, as discussed above with respect to claim 20. Claim 25 is also submitted to be allowable, for at least those reasons discussed above with respect to claim 20. Withdrawal of the rejection of claim 25 is earnestly solicited.

Claim Rejections - 35 U.S.C. § 103:

Application Serial No. 09/869,082
Amendment dated December 17, 2004
Reply to Office action of September 17, 2004

Claims 21 and 26 have been rejected under 35 U.S.C. § 103 as being unpatentable over Atwood in view of the Pan *et al.* WO 97/07241. The rejection is traversed. Reconsideration is earnestly solicited.

Claim 21 depends from claim 20 and adds further distinguishing elements. Atwood neither teaches, discloses, nor suggests a concave well having a known volume, as discussed above with respect to claim 20. Pan does not, either. Claim 21 is thus also submitted to be allowable. Withdrawal of the rejection of claim 21 is earnestly solicited.

Claim 26 depends from claim 25 and adds further distinguishing elements. Atwood neither teaches, discloses, nor suggests a concave well having a known volume, as discussed above with respect to claim 20. Pan does not, either. Claim 26 is thus also submitted to be allowable. Withdrawal of the rejection of claim 26 is also earnestly solicited.

Claim 24 has been rejected under 35 U.S.C. § 103 as being unpatentable over Atwood in view of the Kuan *et al.* US 6,181,811. The rejection is traversed. Reconsideration is earnestly solicited.

Claim 24 depends from claim 20 and adds further distinguishing elements. Atwood neither teaches, discloses, nor suggests a concave well having a known volume, as discussed above with respect to claim 20. Kuan does not, either. Claim 24 is thus also submitted to be allowable. Withdrawal of the rejection of claim 24 is earnestly solicited.

New claim 44:

None of the cited references teaches, discloses, or suggests a coverslip having a concave well of a known volume, as recited in claim 44. Claim 44 is thus also submitted to be allowable.

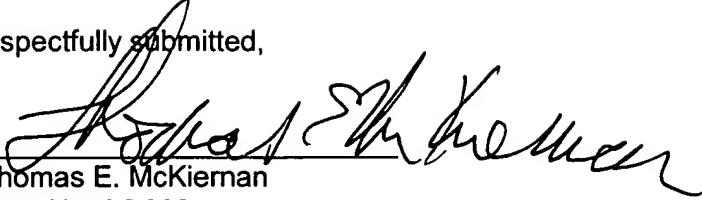
Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all claims 20 through 26 and 44 are allowable over the cited references. Allowance of all claims 20 through 26 and 44 and of this entire application are therefore respectfully requested.

Application Serial No. 09/869,082
Amendment dated December 17, 2004
Reply to Office action of September 17, 2004

Respectfully submitted,

By _____


Thomas E. McKieman
Reg. No. 37,889
Attorney for Applicants
ROTHWELL, FIGG, ERNST & MANBECK
Suite 800, 1425 K Street, N.W.
Washington, D.C. 20005
Telephone: (202)783-6040

113a-am4